

RIDGE WAVEGUIDE SEMICONDUCTOR LASER DIODE

ABSTRACT OF THE DISCLOSURE

A GaAs based semiconductor laser having a combination of cladding layers including a ridge structure part, and a remaining part which overlays the active layers of the laser, and an etch stop layer sandwiched between the ridge structure part and the remaining part. The remaining part preferably overlies the entire surface of laser active layers and has a thickness "D" which satisfies $1.1 \times W > D \geq 0.5 \times W$ wherein W is the width of a spot size having a strength of $1/e^2$ as measured at the laser front facet in a direction perpendicular to the active layers, wherein "e" is the base of the natural logarithm. The semiconductor laser solves the kink phenomenon to obtain an excellent linear relationship between the optical output power and the injected current.